REMARKS

Favorable reconsideration of this application, in light of the preceding amendments and following remarks, is respectfully requested.

Claims 18-33 are pending in this application. The present amendment amends claims 18 and 25. No new matter has been added in the amendments.

Objection to the Claims

Claim 1 is objected to because of informalities.

Applicants respectfully submit that claim 1 has been canceled from the claims. Therefore, the objection has been rendered moot.

Withdrawal of the objection is respectfully requested.

Rejections under 35 U.S.C. §103

Claims 17-33 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Pershan (US 6865266 B1) in view of Elliott et al (US 20040022237 A1). Applicants respectfully traverse this rejection for the reasons detailed below.

In order for an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed.

Cir. 1988); *In re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996). See MPEP 2143.

Rejection to Claim 17

In this response, applicants have cancelled claim 17. Therefore, this rejection has been rendered moot.

Rejection to claim 18

In this response, applicants have amended claim 18 to recite:

"A method for implementing call routing, to be used in a next generation network using soft switch control device(s) as core control device(s), comprising implementing call routing by route service devices,

wherein implementing call routing by the route service devices comprises the following steps of:

(a) upon a user route change, a soft switch control device reporting a changed route information to route service device(s) at father node(s) of the soft switch control device, the changed route information including user characteristics information, user node information and route operation type;

(b) the route service device(s) that received the reported changed route information looking up a record of a user to be registered from a route information database, and registering a route record of the user to the route information database according to the reported changed route information and content of the record of the user;

(c) when a route information of the user reflects a change between a local node and its father node, the route service device(s) that finished registration broadcasting the route information reflecting the change to route service device(s) at father node(s) of the route service device(s) that finished registration;

(d) the route service device(s) that received the broadcasted route information registering and broadcasting the received broadcasted route information according to the same method as the route service device(s) that received the reported changed route information;

(e) when calling across domains, a soft switch control device to which the calling belongs initiating an inquiry to route service device(s) at father node(s) of the soft switch control device to which the calling belongs;

(f) the route service device(s) that received a request of the inquiry looking up a route record of a user to be looked up from the route information database, if an inquiring result of the route of the user or an inquiring result indicates that the user does not exist is obtained, performing step (h), otherwise, performing step (g);

(g) the route service device(s) continuing an inquiry to a node in said route record, if there is no route record, continuing an inquiry to its father node(s), and returning to step (f); and

(h) returning the inquiring result to the node that initiated the inquiry, any node that receives the inquiring result continuing to return the inquiring result, until returning to the soft switch control device which first initiated the inquiry."

By means of the technical scheme recited in claim 18 of the present invention, especially steps (a)-(h), the present invention provides a method for implementing call routing, to be used in a next generation network using soft switch control device(s) as core control device(s), when a user U1 on a soft switch control device S1 calls a user U2 on another soft switch control device S2 (please see the third paragraph under the subtitle "Technical Background" of the description of the present invention). In other words, it can be seen that one of the technical problems solved in the present invention is to implement call routing between users on ***different*** **soft switch** control devices ***within*** a **next generation** network.

Neither Pershan nor Elliott, either separately or in combination, teaches or suggests the above technical features in claim 18 of the present invention. Regarding the method and apparatus for transferring from a PSTN to a VOIP telephone network disclosed by Pershan, "AIN based method and apparatus for transitioning telephone numbers and customers from the PSTN to a VOIP network are described. AIN line number portability features are used to allow a few gateway switches that interconnect the PSTN and VOIP networks to service customers whose telephone number were originally serviced by several remote PSTN switches" (Please see the abstract of Pershan). It can be seen that the technical problem solved in Pershan is to transit telephone numbers and customers from a PSTN to a VOIP network. To one of ordinary skills in the art, it is known that PSTN is **not** a next generation network, and there is **not any** soft switch device in the PSTN. Thus it can be seen that the technical problem solved in claim 18 of the present invention is *completely different* from that in Pershan. Pershan fails to solve the problem solved in the present invention. Regarding the system and method for communicating voice and data over a packet-switched network disclosed by Elliott, Elliott also fails to solve the problem solved in the present invention.

In detail, with regard to step (a) in claim 18 of the present invention, the triggering event that activates step (a) in claim 18 of the present invention is "upon a user route change". Without the

triggering event "upon a user route change," remaining actions in steps (a), (b), (c), (d), (e), (f), (g) and (h) would not be activated. What constitutes "a user route change" is explained by way of examples on page 12, lines 14-21, of the description (e.g., when a user joins a soft switch device, or when a user account-cancels from a soft switch device, or when a user moves from a soft switch device to another soft switch device). Thus in claim 18 of the present invention, **once user route changes** (for example, when a user joins a soft switch device, or when a user account-cancels from a soft switch device, or when a user moves from one soft switch device to another soft switch device), **no matter whether there is a calling**, the changed route information will be reported to route service device(s) at father node(s) of the soft switch control device. That is to say, by the method defined in claim 18 of the present invention, the changed route information will be reported to route service device(s) at father node(s) of the soft switch control device **timely** upon a user route change **during routine maintenance, no matter whether there is a calling**.

In reviewing both Pershan and Elliott, there are no disclosures or teachings of a triggering event equivalent to "upon a user route change." In particular, the soft switches in Pershan do *not* report changed route information to the servers *upon a user route change*. Significantly, Pershan specifically describes, "Soft switches 130, 152 provide calling and called information to the servers, then the servers determine routing and move the call to its ultimate destination, e.g., they determine the routing instructions for called numbers" (column 10, lines 16-19). It can be seen that Pershan only discloses a step for the servers to inquire calling and called information. To one of ordinary skills in the art, it is known that calling and called information are provided *during the process of calling*. In other words, in Pershan, the triggering event for the soft switches providing information to the servers is **when there is a calling**, but **not** upon a user route change. Actually, Pershan does **not** disclose anything about ***whether*** *the user route changes or not* when the soft switches 130 and 152 provide calling and called information to the servers. Elliott also fails to disclose or teach a

triggering event equivalent to "upon a user route change." Accordingly, claim 18 is allowable for at least these reasons.

Furthermore, claim 18 of the present invention recites "the changed route information includes user characteristics information, user node information and type of route operation". What constitutes "user node information" and "type of route operation" is explained by way of examples in the first paragraph under the subtitle "Preferred Embodiments of the Present Invention," and lines 3-21 on page 12 of the description. The user node information can be the landing node information (the information of the soft switch device for user landing) or the report node information (information of the node reporting route information); the type of route operation can be move-out, account-cancel, or addition. Since the changed route information in claim 18 of the present invention includes user ***node*** **information** and ***type*** of route **operation**, the corresponding actions in steps (f) and (g), such as "*looking up a route record of a user to be looked up from the route information database*", determining "*if an inquiring result of the route of the user or an inquiring result indicates that the user does not exist is obtained*", and "*the route service device(s) continuing an inquiry to a node in said route record, if there is no route record, continuing an inquiry to its father node(s),*" can be implemented. However, Pershan does not teach or suggest such features. Pershan only discloses "Soft switches 130 including routing information and other control information" (column 9, lines 66-67) and "Such information may include call screening information, call forwarding information, telephony device status information, customer name/address information and a wide variety of other types of information such as bandwidth capability" (column 10, lines 33-37). **Nowhere** does Pershan teach or suggest that the route information includes user **node information** such as the landing node information or the report node information, or includes **type** of route **operation** such as move-out, account-cancel or addition. Elliott fails to disclose or teach such technical features as well. Claim 18 is thus allowable

for this additional reason.

Still further, claim 18 of the present invention recites "(c) when a route information of the user reflects a change between a local node and its father node, the route service device(s) that finished registration broadcasting the route information reflecting the change **to route service device(s) at father node(s)** of the route service device(s) that finished registration." Claim 18 of the present invention also recites "(f) ... if an inquiring result of the route of the user or an inquiring result indicates that the user does not exist is obtained, performing step (h), otherwise, performing step (g)" and "(g) the route service device(s) continuing an inquiry to a node in said route record, if there is no route record, continuing an inquiry to its father node(s), and returning to step (f)." It can be seen that in claim 18 of the present invention, there may be at least one ***additional*** route service device at the **father** node(s) of the route service device(s) that finished registration, and the route service device(s) may continue an inquiry to its father node(s) if there is no route record. However, Pershan lacks a teaching or suggestion of these features. From Figure 1 of Pershan, it can be seen that the media/proxy servers 132 and 156 do not have any father node. Thus in Pershan, the server does *not* broadcast the route information reflecting the change to its father node(s), and does *not* continue an inquiry to its father node(s) if there is no route record. Thus it is **impossible** for Pershan to disclose the technical features in the recited steps (c), (f) and (g) in claim 18 of the present invention. In addition, Elliott only discloses **one** access server 232a in the system (see paragraph [0882] and Figure 5D of Elliott). **Nowhere** does Elliott disclose or teach that any additional server may be at the father node of the server. Thus Elliott also fails to disclose or teach the above-described technical features. Accordingly, claim 18 is allowable for this additional reason.

Additionally, as discussed above, there are no disclosures or teachings of a triggering event equivalent to "upon a user route change" in either Pershan or Elliott. Naturally, they also fail to disclose or teach equivalent remaining actions that would follow. Accordingly, claim 18 is

allowable for at least the above reasons.

Rejections to Claims 19-24

Claims 19-24 are dependent on claim 18 and are thus allowable for at least the same reasons as claim 18.

Rejection to Claim 25

In this response, applicants have amended claim 25 to recite:

"A system for implementing call routing, to be used in a next generation network using soft switch control device(s) as core control device(s), comprising a plurality of soft switch control devices with users,

wherein, the system further comprises a plurality of route service devices, each of said route service devices and each of said soft switch control device form a node of the system, and the nodes are networked in a layered form, each sub-node has at least a father node, and each father node has at least a sub-node, said soft switch control device is a node at the lowest layer, and said route service device should have a sub-node, wherein:

said soft switch device reports changed route information to the route service device at a father node when its user adding or moving out, and initiates a route inquiry to the route service device at the father node when its user calls across domains; and

said route service device is for registering the reported information, performing adding, deleting and updating of route record in a route information database, broadcasting the changed route information to related node, performing inquiry after receiving the inquiry request, and returning inquiring result to the node initiating the inquiry."

The applicants respectfully submit that independent claim 25 is allowable for at least similar reasons as mentioned above for claim 18.

In particular, independent claim 25 specifically recites a condition "when its user adding or moving out," a series of steps would be implemented. Neither Pershan nor Elliott discloses or teaches these issues. As discussed above, the soft switches in Pershan provide information to the servers **only when there is a calling**, but **not** when its user adding or moving out. Elliott also fails to disclose or teach this technical feature. Naturally, they also fail to disclose or teach the series of steps that would be implemented thereafter.

Accordingly, claim 25 is allowable for at least these reasons.

Rejection to Claim 26

Claim 26 is dependent on claim 25 and is thus allowable for at least the same reasons as claim 25.

Rejection to Claim 27

Independent claim 27 recites:

"A route service device to be used in a next generation network, comprising:
a route information database module,
a route registration module,
a route broadcast module, and
a route inquiry module,
wherein the route information database module is for storing a route record of a user, inputting the route record of the user, and providing an interface for accessing the route record of the user;
wherein the route registration module is for receiving a route information reported or forwarded by the route broadcast module, looking up a record of a user to be registered from the route information database, and registering the route record of the user to the route information database according to the reported route information and content of the user record;
wherein the route broadcast module is for receiving a broadcasted route information, and when a route information of a user reflects a change between a local node and its father node, broadcasting the route information of the user reflecting the change to its father node; and
wherein the route inquiry module is for receiving or sending an inquiry request, looking up the a record of a user to be inquired from the route information database, returning an inquiring result to a node requesting the inquiry upon finding a route of the user, upon determining that there is no user or upon receiving an inquiring result provided by other nodes, otherwise, continuing an inquiry to the node in the route record, and if there is no route record, then continuing an inquiry to its father node."

The applicants respectfully submit that independent claim 27 is allowable for at least similar reasons as mentioned above for claim 18.

In particular, independent claim 27 specifically recites a condition "when a route information of a user **reflects a change** between a local node and its father node," a series of steps would be implemented. Neither Pershan nor Elliott discloses or teaches these issues. As discussed above, the soft switches in Pershan provide information to the servers **only when there is a calling**, but **not** when a route information of a user reflects a change between a local node and its father node. Elliott also fails to disclose or teach this technical feature. Naturally, they also fail to disclose

or teach the series of steps that would be implemented thereafter.

Accordingly, claim 27 is allowable for at least these reasons.

Rejections to Claims 28-33

Claims 28-33 are dependent on claim 27 and are thus allowable for at least the same reasons as claim 27.

Accordingly, withdrawal of the rejections is respectfully requested.

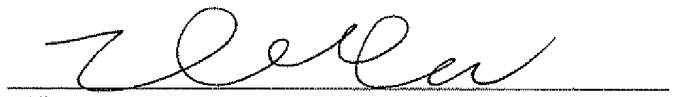
CONCLUSION

Accordingly, in view of the above amendments and remarks, reconsideration of the objections and rejections and allowance of each of claims in connection with the present application is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact undersigned at the telephone number of the undersigned below.

Respectfully submitted,

Kile Goekjian Reed & McManus, PLLC

By 

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